

WHAT IS CLAIMED IS:

1. An optical transmitter comprising:
 - a modulator for generating optical signals in response to input electrical signals;
 - 5 a first lens for focusing output of the EML to prevent signal loss;
 - a second lens for focusing the output of the first lens into a core portion of an optical line; and,
 - a band stop filter for removing the D.C. component from the output of the second lens.
- 10 2. The transmitter according to claim 1, further comprising an optical isolator coupled between the first lens and the second lens for preventing the reflected optical signals flowing back into the modulator.
- 15 3. The transmitter according to claim 1, wherein the band stop filter comprises a Fiber Bragg Grating.
4. The transmitter according to claim 1, wherein the band stop filter comprises a Tilted Fiber Bragg Grating.
- 20 5. The transmitter according to claim 1, wherein the band stop filter comprises an integrated filtering element.

6. The transmitter according to claim 1, wherein the band stop filter is provided outside of the transmitter.

5 7. The transmitter according to claim 1, wherein the modulator is an EML (Electro-absorption Modulator Laser).

8. An optical transmitter comprising:
a generator for providing electrical signals;
10 a modulator for providing optical signals in response to the electrical signals;
a filter for removing the DC component of the optical signals; and,
the filter comprising:
a first lens for focusing the optical signals;
a second lens for focusing the output of the first lens into a core portion of an
15 optical line; and,
a band stop filter for removing the D.C. component from the output of the second
lens.

9. The transmitter according to claim 8, further comprising an optical isolator
20 coupled between the first lens and the second lens for preventing the reflected signals
flowing back into the modulator.

10. The transmitter according to claim 8, wherein the band stop filter comprises a
Fiber Bragg Grating.

11. The transmitter according to claim 8, wherein the band stop filter comprises a
5 Tilted Fiber Bragg Grating.

12. The transmitter according to claim 8, wherein the band stop filter comprises an
integrated filtering element.

10 13. The transmitter according to claim 8, wherein the band stop filter is located
outside of the EML transmitter.

14. The transmitter according to claim 8, wherein the modulator is an EML
(Electro-absorption Modulator Laser).
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15. An optical transmitter comprising:
a modulator for generating optical signals in response to input electrical signals;
a first lens for focusing output of the EML to prevent signal loss;
a filter for removing the D.C. component from the output of the first lens; and,
20 a second lens for focusing the output of the filter into a core portion of an optical
line.

16. The transmitter according to claim 15, further comprising an optical isolator coupled between the first lens and the filter for preventing the reflected optical signals flowing back into the modulator.

5 17. The transmitter according to claim 15, wherein the modulator is an EML (Electro-absorption Modulator Laser).